AMENDMENT TO THE CLAIMS:

Please cancel claims 1-14 without prejudice and please add new claims 15-30 as follows:

15. (New) A substance adsorption detection method comprising:

providing an optical waveguide path on a crystal oscillator which further comprises a crystal and electrodes formed on either side of said crystal; and

measuring an oscillation characteristic of said crystal oscillator and of light transmitted on said optical waveguide path.

16. (New) The substance adsorption detection method according to claim 15, wherein said waveguide path is an optical waveguide layer which has a clad portion and a core, said core being made of a higher refractive index medium than said clad portion, both said core and said clad portion being stacked on said crystal oscillator.

17. (New) The substance adsorption detection method according to claim 15, wherein one of said electrodes is an optical waveguide electrode made of an electrically conductive transparent material having a higher refractive index than a refractive index of said crystal, said optical waveguide electrode serving as said optical waveguide path.

18. (New) The substance adsorption detection method according to claim 15, wherein an interior of said crystal oscillator serves as an optical waveguide path.

19. (New) The substance adsorption detection method according to claim 15, wherein a metallic film is formed on said optical waveguide path.

20. (New) A substance adsorption detection method comprising:

measuring a propagation characteristic of a surface acoustic wave in a surface acoustic wave element, and of light guided through an optical waveguide path provided in or on said surface acoustic wave element.

21. (New) A substance adsorption detection method comprising:

forming a metallic colloid layer on at least one of a crystal oscillator and a surface acoustic wave element;

measuring an adsorbed mass with at least one of said crystal oscillator and said surface acoustic wave element; and

measuring an optical characteristic of said metallic colloid layer.

22. (New) The substance adsorption detection method according to any one of claims 15 to 21, wherein a sensitive material layer whose optical characteristic is changed by substance adsorption is provided.

23. (New) A sensor comprising:

a crystal oscillator which further comprises a crystal and electrodes formed on either side of said crystal; and

an optical waveguide path for guiding light.

24. (New) The sensor according to claim 23, wherein said waveguide path is constituted as an optical

waveguide layer which has a clad portion and a core, said core being made of a higher refractive index medium than said clad portion, both said core and said clad portion being stacked on said crystal oscillator.

25. (New) The sensor according to claim 23, wherein one of said electrodes is an optical waveguide electrode made of an electrically conductive transparent material having a higher refractive index than a refractive index of said crystal, said optical waveguide electrode serving as said optical waveguide path.

26. (New) The sensor according to claim 23, wherein an interior of said crystal oscillator serves as said optical waveguide path.

27. (New) The sensor according to claim 23, wherein a metallic film is formed on said optical waveguide path.

28. (New) A sensor which measures a propagation characteristic of a surface acoustic wave in a surface acoustic wave element, and light guided through an interior of said surface acoustic wave element.

29. (New) A sensor comprising:

a crystal oscillator or a surface acoustic wave element; and a metallic colloid layer formed on said crystal oscillator or said surface acoustic wave element.

30. (New) The sensor according to any one of claims 23 to 29, wherein a sensitive material layer whose optical characteristic is changed by substance adsorption is provided.